7.02 Asset Retirement Obligations

Asset Retirement Obligations

Asset retirement obligations (ARO), such as estimated restoration costs, that are expected to be paid at the end of the period of usage, should be recorded as a liability at **fair value**. This is the amount at which that obligation could be settled today. (ASC 410) If fair value cannot be determined, an estimate should be made based on the **present value of the expected future costs** using credit-adjusted risk-free rate of return.

The liability will have to be increased each year based on the discount rate and reported as accretion expense. Accretion is the growth of the liability over time so that when the liability is satisfied, it is reported at its total nondiscounted value. The liability is considered **long term** and is amortized using the effective interest method.

Assume an oil field is acquired at a cash price of $100,000. It is estimated that, following the extraction of oil, it is expected to cost approximately $20,000 to restore the property to an acceptable condition when extraction is completed (estimated to be 12 years from now), and that the land will, at that point, have a $30,000 value.

Assume further that the fair value of the restoration costs cannot be determined, but that a discount rate of 6% is considered appropriate.

The present value of 1 at 6% for 12 years is 0.50, so the restoration costs of $20,000 have a present value (ie, an estimated fair value) of $20,000 × 0.50 = $10,000. The entry to record acquisition of the property is:

Land	30,000	
Oil reserves	80,000	
Cash		100,000
ARO liability (Est rest costs)		10,000

The estimated restoration costs are classified as long-term liabilities since they won't be paid until drilling is completed (ie, in about 12 years). The oil reserves, which result from a plug in the above entry, are depleted and inventoried as oil is removed from the ground, then expensed as oil is sold.

The ARO liability (estimated restoration costs) is increased each year by the incremental rate of 6%, so that the liability will be increased by a credit of $10,000 × 6% = $600 in the first year, with an offsetting debit to accretion expense.

Accretion expense	600	
ARO liability		600

Disclosures

- Description of the obligation and related asset
- Description of how fair value was determined
- The funding policy
- A reconciliation of the beginning and ending carrying value